



(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
02.07.2014 Bulletin 2014/27

(51) Int Cl.:
H02J 7/35 (2006.01)

(43) Date of publication A2:
13.06.2012 Bulletin 2012/24

(21) Application number: **11192863.6**

(22) Date of filing: **09.12.2011**

(84) Designated Contracting States:
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
Designated Extension States:
BA ME

(71) Applicant: **GEM Corporation**
Otsu, Shiga 520-0047 (JP)

(72) Inventor: **Sada, Tsutomu**
Otsu, Shiga 520-0047 (JP)

(74) Representative: **Reitstötter Kinzebach**
Patentanwälte
Sternwartstrasse 4
81679 München (DE)

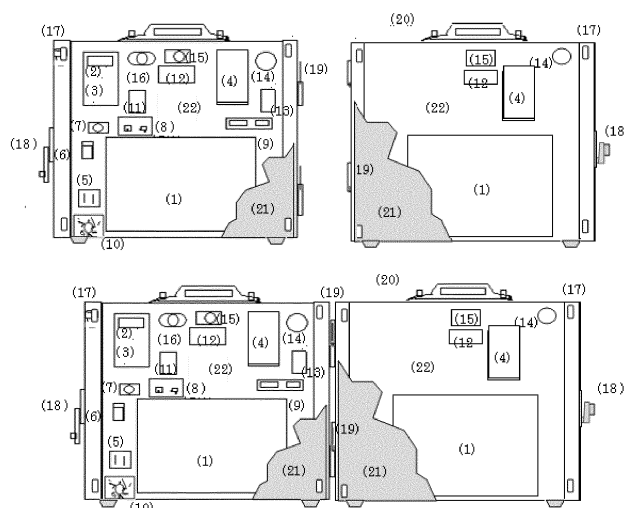
(30) Priority: **10.12.2010 JP 2010008528 U**
10.02.2011 JP 2011001088 U
31.07.2011 JP 2011178136

(54) **Power generation and storage system**

(57) Power generation and storage system and/or solar power generation and storage involving a system for controlling charge-discharge functions, and comprising a power storage, a lithium ion rechargeable battery sole or in combination with capacitor condenser as battery units, a charge-discharge control unit containing a charge-discharge controller, a protection circuit protecting against over-charge and over-discharge operations, a thermal fuse for protecting against IC circuit system

destruction, a thermistor and a back flow preventing diode, a system control unit involving an input-output controller, containing a regulative diode, a due point sensor, a terminal regulator, a float type flow-meter, a pulse width modulation, current control unit interface part involving a DC - AC inverter system. Furthermore, a UPS system is disclosed which involves such a power generation and storage system and a blackout detector.

Figure 2





EUROPEAN SEARCH REPORT

Application Number
EP 11 19 2863

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 2009/039705 A1 (LYMAN ZACHARY [US] ET AL) 12 February 2009 (2009-02-12) * the whole document *	1-16	INV. H02J7/35
X	US 5 714 869 A (TAMECHIKA MASANARI [JP] ET AL) 3 February 1998 (1998-02-03) * column 2, line 65 - column 3, line 39; figure 1 *	1	
X	FR 2 877 510 A1 (MELLO SERGE [FR]; MELLO SIMONNE [FR]; SCHLEE SERGE [FR]) 5 May 2006 (2006-05-05) * the whole document *	1,8	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (IPC)
			H02J
Place of search		Date of completion of the search	Examiner
Munich		23 May 2014	Schmidt, Rainer
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document			
T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 11 19 2863

5

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

23-05-2014

10

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2009039705 A1	12-02-2009	US 2009039705 A1	12-02-2009
		US 2011101782 A1	05-05-2011
US 5714869 A	03-02-1998	JP 3368124 B2	20-01-2003
		JP H09121470 A	06-05-1997
		US 5714869 A	03-02-1998
FR 2877510 A1	05-05-2006	NONE	

15

20

25

30

35

40

45

50

55

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82